Challenge Electronics Piezoelectric X-tal Sounding Element: 12.0 mm diameter, 0.21 mm High; Direct Type; Resonant Frequency (Fo) 9,000 Hz.; Brass Diaphragm; Wire Leads 51 mm Long; RoHS & REACH Compliant

Features

- RoHS, Lead Free, and REACH Compliance

Specification

Part Number: CEPX-12D90BW51

Revision: 1-2015

Part Number Dimensions

<table>
<thead>
<tr>
<th>Assembly Type</th>
<th>Direct Drive</th>
<th>Maximum Operating Voltage</th>
<th>30 Vp-p</th>
<th>Resonant Frequency (Fo)</th>
<th>9,000 ± 1,000 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resonant Impedance</td>
<td>Maximum 1,000 Ohms</td>
<td>Static Capacitance</td>
<td>8,000 ± 30% pF at 1,000 Hz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical - Mechanical Coupling Coefficient</td>
<td>(kp)</td>
<td>&gt;</td>
<td>(tg6)</td>
<td>Loss</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-20°C to +60°C</td>
<td>Storage Temperature</td>
<td>-20°C to +70°C</td>
<td>Approximate Weight</td>
<td>grams</td>
</tr>
</tbody>
</table>

Materials

- Ceramic Piezoelectric Ceramic Disc, Silver Coated, 9 mm Ø
- Terminals Wire 32 AWG, per UL 1571, 51.0 ± 5.0 mm long, stripped and tinned 2.0 ± 1.0 mm long

Reliability

- Parts should conform to original performance within ±3 dB, after 3 hours of recovery and dry period.
- Thermal Operating Cycle Test: 96 hours continuous operation each at minimum & maximum rated Operating Temperatures.
- Thermal Storage Cycle Test: 96 hours continuous operation each at minimum & maximum rated Storage Temperatures.
- Thermal Shock Test: Put in minimum operating temperature for 1 hour than move to +20°C for 5 min. than at maximum operating temperature for 1 hour. than back to +20°C 5 min. Repeat for 5 cycles.
- Humidity Test: 120 Hours at +60°C±2°C. 90-95% RH
- Vibration Test: 2 Hours at 1.5 mm with 10 to 50 Hz. Of vibration frequency to each of 3 perpendicular direction
- Thermal Operating Cycle Test: 96 hours continuous operation each at minimum & maximum rated Operating Temperatures.

Caution

Do not maintain Vdc (Direct Current) on the Piezoelectric Assembly. Direct Voltage may depolarize the Piezoelectric Ceramic Disc.

Warranty

For a period of one (1) years from date of shipping under normal operations conditions.

This warranty does not apply to products damaged through misuse, abuse, improper installation, alteration, rework, or attempt to repair.

Dimensions

Dimensions are in: Inches/(mm), Tolerance: ±0.025”/(±0.6 mm)

- Brass Diaphragm
- Ceramic Disc
- Silver Coating
- 12.0 ±0.1 Ø
- 9.0 ±0.4 Ø
- 0.1 ±0.02
- 0.21 ±0.05
- 51.0 ±5.0

Substance Of Very High Concern (REACH) and RoHS Lead Free Compliance

This product does NOT contain any of the REACH Substances of Very High Concern (SVHC), and is in compliance with European Union REACH Regulation No.1907/2006 regarding chemical substances which must be registered or disclosed.

Cadmium (Cd) / Cadmium Compounds ≤ 100 ppm In compliance
Lead (Pb) / Lead Compounds ≤1,000 ppm ≤ 10,000 ppm (*)
Mercury (Hg) / Mercury Compounds ≤1,000 ppm In compliance
Hexavalent-Chromium (Cr6+) ≤1,000 ppm In compliance
Poly Brominated Biphenyls (PBB) ≤1,000 ppm In compliance
Poly Brominated Diphenyl Ethers (PBDE) ≤1,000 ppm In compliance
Arsenic (As) ≤1,000 ppm In compliance

Packaging

- Part Number
- Dimensions L cm
- Other PN (if required) W cm
- Lot and/or Date Code Quantity 50
- Box _ of _ Number of Trays
- Made in China
- Approximate Weight Kg.

Revision Description

<table>
<thead>
<tr>
<th>Revision</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2015</td>
<td>Revised Termination, specifying wire, length and type</td>
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CE-EG-04.400 PX, Piezoelectric Elements Specifications

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7/16/2015